

**Notice of Allowability**

Application No.

10/681,543

Examiner

Bernarr E. Gregory

Applicant(s)

CIST, DAVID B.

Art Unit

3662

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment that was received 16 December 2004.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

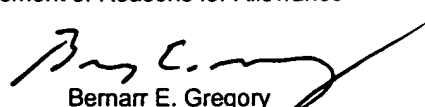
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Bernarr E. Gregory  
Primary Examiner  
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1. The following changes to the drawings have been approved by the examiner: the “ground penetrating radar” that is now recited in claim 15 as amended MUST be illustrated in the drawings per 37 CFR 1.83 (a). Preferably, it should be in Figure 1. Correction is hereby **required**.

**In order to avoid abandonment of the application, applicant must make these drawing changes.**

2. The following is an examiner’s statement of reasons for allowance:

None of the prior art of record either taken alone or taken in any possible combination would anticipate or would tend to render obvious Applicant’s claimed method as set forth in independent claim 1 that is particularly characterized at least by the claimed method steps of “determining an effective penetration limit of the GPR ...” (lines 5-6) and “obtaining the information about the electrical properties of the medium based at least in part on the effective penetration limit” (lines 7-8) taken together and taken in the overall context of independent claim 1.

Dependent claims 2-12 are allowable for at least the reasons for which independent claim 1 is allowable.

None of the prior art of record either taken alone or taken in any possible combination would anticipate or would tend to render obvious Applicant’s claimed method as set forth in independent claim 13 that is particularly characterized at least by the claimed method steps of “multiplying the first data stream and the second data stream ...” (lines 9-10); “dividing the resultant scan ...” (lines 11-12); “summing a plurality of

samples ..." (lines 13-14); "selecting a summed value that corresponds to a significant increase ..." (lines 15-17); and "determining the effective penetration limit of the GPR system as a depth ..." (lines 18-19) taken together and taken in the overall context of independent claim 13.

Dependent claim 14 is allowable for at least the reasons for which independent claim 13 is allowable.

None of the prior art of record either taken alone or taken in any possible combination would anticipate or would tend to render obvious Applicant's claimed apparatus as set forth in independent claim 15 that is particularly characterized at least by the claimed "control unit configured to ... in part on the effective penetration limit" (lines 4-10) taken in the overall context of independent claim 15.

Dependent claims 16-17 are allowable for at least the reasons for which independent claim 15 is allowable.

None of the prior art of record either taken alone or taken in any possible combination would anticipate or would tend to render obvious Applicant's claimed computer program product as set forth in independent claim 18 that is particularly characterized at least by the claimed computer-implemented steps of "determining an effective penetration limit of the GPR system ..." (lines 6-7) and "obtaining the information about the electrical properties of the medium based at least in part on the effective penetration limit" taken together and taken in the overall context of independent claim 18.

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Dependent claims 19-21 are allowable for at least the reasons for which independent claim 18 is allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernarr E. Gregory whose telephone number is (703) 306-5765. The examiner can normally be reached on weekdays from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza, can be reached on (703) 306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Bernarr E. Gregory", with a long, sweeping flourish extending to the right.

Bernarr E. Gregory  
Primary Examiner  
Art Unit 3662